In re Appln. of Monne et al.
Application No. 10/550,971
Response to Office Action of March 6, 2009

Listing of the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Claim 1 (currently amended): A distributed speech recognition method, comprising at least one user terminal and at least one server, capable of communicating with one another via a telecommunications network, wherein, at the user terminal, at least the following steps are performed:

obtain an audio signal to be recognized;

calculate modeling parameters for the audio signal to be recognized; ~~and~~

attempt to associate a stored form with the modeling parameters; and

independently of the step for attempting to associate a stored form, <u>select a signal from at least the audio signal to be recognized and a signal indicating the modeling parameters, as a function of criteria relating to loading issues of the various processing means at the level of the terminal and of the server, and/or as a function of criteria relating to the availability of voice or data transmission channels;</u>

<u>sending the selected signal to the server; and</u>

~~transmit a signal indicating the audio signal to be recognized to the server; and~~

wherein, at the server, at least the following steps are performed:

receive the signal transmitted by the user terminal; <u>and</u>

attempt to associate a stored form with the received signal.

Claim 2 (previously presented): The distributed speech recognition method as claimed in claim 1, wherein the signal transmitted by the user terminal to the server is selected from at least the audio signal to be recognized and a signal indicating the modeling parameters;

wherein, if the received signal is of the audio type, the server calculates modeling parameters for the received audio signal and attempts to associate a stored form with the modeling parameters of the received audio signal; and

wherein, if the received signal indicates modeling parameters, the server attempts to associate a stored form with said modeling parameters.

2

In re Appln. of Monne et al.
Application No. 10/550,971
Response to Office Action of March 6, 2009

Claim 3 (previously presented): The method as claimed in claim 1, wherein obtaining the signal to be recognized at the terminal comprises a voice activation detection in order to produce the audio signal to be recognized in the form of speech segments extracted from an original audio signal outside of periods without voice activity.

Claim 4 (previously presented): The method as claimed in claim 3, wherein the transmitted signal is a signal selected from amongst at least the original audio signal, the audio signal to be recognized in the form of segments extracted after voice detection and the signal indicating the modeling parameters.

Claim 5 (currently amended): The method as claimed in claim ~~claims~~ 2, wherein, when the received signal is of the audio type:

if the received audio signal is in the form of speech segments extracted after voice detection, the server calculates modeling parameters for the received signal and attempts to associate a stored form with the modeling parameters of the received audio signal;

otherwise, the server performs a voice activation detection applied to the received audio signal in order to produce an audio signal in the form of speech segments extracted from the received audio signal outside of periods without voice activity, then calculates modeling parameters for the audio signal and attempts to associate a stored form with the modeling parameters.

Claim 6 (currently amended): The method as claimed in claim ~~claims~~ 1, wherein the associated stored form determined at the terminal is chosen, when this associated form exists.

Claim 7 (currently amended): The method as claimed in claim ~~claims~~ 1 wherein the associated stored form determined the quickest, between the associated stored form determined at the terminal and the associated stored form determined at the server, is chosen.

Claim 8 (currently amended): The method as claimed in claim ~~claims~~ 1 wherein the associated stored form judged best between the associated stored form determined at the terminal and the associated stored for determined at the server, according to a defined selection criterion is

3

In re Appln. of Monne et al.
Application No. 10/550,971
Response to Office Action of March 6, 2009

chosen.

Claim 9 (currently amended): A user terminal adapted for cooperating with a server, comprising:

        means for obtaining an audio signal to be recognized;

        means for calculating modeling parameters for the audio signal; and

        ~~control means for selecting a signal to be transmitted to the server from between the audio signal to be recognized and a signal indicating the calculated modeling parameters;~~

        recognition means for associating at least one stored form with modeling parameters calculated by the calculation means; <u>and</u>

        <u>control means for selecting a signal to be transmitted to the server from between the audio signal to be recognized and a signal indicating the modeling parameters calculated, the selecting based on a function of criteria relating to loading issues of the various processing means at the level of the terminal and of the server, and/or on a function of criteria relating to the availability of voice or data transmission channels</u>

        ~~means for transmitting independently from recognition means, a signal indicating the audio signal to be recognized to the server.~~

Claim 10 (previously presented): The user terminal as claimed in claim 9 wherein the means for obtaining the audio signal to be recognized comprise means for detecting voice activity in order to produce the signal to be recognized in the form of speech segments extracted from an original audio signal, outside of periods without voice activity.

Claim 11 (previously presented): The user terminal as claimed in claim 10 wherein the control means are designed to select at least one signal to be transmitted to the server from amongst the original audio signal, the audio signal to be recognized in the form of the speech segments extracted by the voice activation detection means and the signal indicating the calculated modeling parameters.

Claim 12 (currently amended): The user terminal as claimed in <u>claim</u> ~~claims~~ 9 wherein at least one part of the parameter calculation means and of the recognition means is downloaded from

In re Appln. of Monne et al.
Application No. 10/550,971
Response to Office Action of March 6, 2009

the server.

Claim 13 (currently amended): The user terminal as claimed in <u>claim</u> ~~claims~~ 9, comprising means for determining the stored form to be chosen between the stored forms determined at the terminal and at the server, respectively.

Claim 14 (currently amended): A server adapted for <u>implementing a distributed speech recognition method</u> ~~cooperating with a user terminal~~ comprising:

~~means for obtaining an audio signal to be recognized;~~

~~means for calculating modeling parameters for the audio signal; and~~

~~control means for selecting a signal to be transmitted to the server from between the audio signal to be recognized and a signal indicating the calculated modeling parameters;~~

~~recognition means for associating at least one stored form with modeling parameters calculated by the calculation means;~~

~~means for transmitting, independently from recognition means, a signal indicating the audio signal to be recognized to the server;~~

~~said server comprising:~~

means for receiving a signal coming from a user terminal and selected at said terminal; and

recognition means for associating at least one stored form with modeling parameters at the input[[.]]<u>;</u>

<u>means for calculating modeling parameters for an input signal;</u>

<u>control means for controlling the calculation means and the recognition means such that:</u>

<u>when the signal received by the reception means is of the audio type, the parameter calculation means are activated by addressing the selected signal to them as input signal, and the parameters calculated by the calculation means are addressed to the recognition means as input parameters, and</u>

<u>when the selected signal received by the reception means indicates modeling parameters, said indicated parameters are addressed to the recognition means as input parameters.</u>

Claim 15 (canceled)

In re Appln. of Monne et al.
Application No. 10/550,971
Response to Office Action of March 6, 2009

Claim 16 (currently amended): The server as claimed in claim 14 ~~15~~ also comprising means for detecting activity in order to produce the signal to be recognized in the form of speech segments extracted from an original audio signal outside of periods without voice activity and in which the control means are designed to control the parameter calculation means and the recognition means when the received signal is of the audio type such that:

if the received signal of the audio type is in the form of speech segments after voice activation detection, the parameter calculation means are activated by addressing the received signal to them as input signal, then the parameters calculated by the parameter calculation means are addressed to the recognition means as input parameters;

otherwise, the server voice activation detection means are activated by addressing the received signal to them as input signal, then the segments extracted by the voice activation detection means are addressed to the parameter calculation means as input parameters, then the parameters calculated by the parameter calculation means are addressed to the recognition means as input parameters.

Claim 17 (previously presented): The server as claimed in claim 14, comprising means for downloading voice recognition software resources via the telecommunications network onto a terminal.

Claim 18 (previously presented): The server as claimed in claim 17, wherein said resources comprise at least one module from amongst: a VAD module, a module for calculating modeling parameters for an audio signal and a recognition module for associating at least one stored form with modeling parameters.

Claim 19 (currently amended): The server as claimed in claim ~~claims~~ 14, comprising means for determining the stored form to be chosen between the stored forms determined at the terminal and at the server, respectively.